Interleukin-11 receptor (IL-11R), and glycoprotein 130 (gp130), thereby decreasing the rate in loss of bone density in said mammalian patient.

- 2. (Reiterated) The method of claim 1, which comprises administering to the patient an effective amount of a substance which inhibits, *in vivo*, the formation of a tertiary complex of IL-11, IL-11R, and gp130.
- 3. (Reiterated) The method of claim 2, wherein the pathological condition is postmenopausal bone loss.
- 4. (Reiterated) The method of claim 2, wherein the substance is a mutant IL-11R.

(Amended Twice) The method of claim 4 or claim 8, wherein the mutant IL-11R has at least one mutation in its gp130 binding region.

- 6. (Amended Twice) The method of claim 5, wherein the mutant IL-11R has at least one of the following mutations: D282→G282, A283→D283, G286→D286, H289→Y289, and V291→L291.
- 7. (Amended Twice) The method of claim 6, wherein the mutant IL-11R has the mutation H289 Y289

3. (Amended Twice) The method of claim 4, wherein the mutant IL-11R is a soluble mutant IL-11R.

- 9. (Amended Twice) The method of claim 4 or claim 8, wherein the mutant IL-11R is a human IL-11R.
- 10. (Reiterated) The method of claim 2, wherein the substance is an anti IL-11 antibody.
- 11. (Reiterated) The method of claim 2, wherein the substance is an IL-11 binding peptide.

12. (Reiterated) The method of claim 11, wherein the substance is an IL-11 binding peptide having an amino acid sequence which specifically binds IL-11 in the region normally bound by IL-11R.

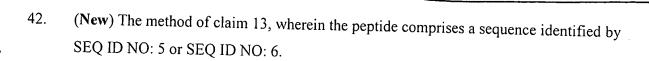
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- (Amended Twice) The method of claim 12, wherein the substance is a peptide comprising the sequence identified by SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, or SEQ ID NO: 10.
- 14. (Reiterated) The method of claim 2, wherein the substance is a small molecule no more than 30 kd in molecular weight.
- 15. (Reiterated) The method of claim 2, wherein the substance is an IL-11 antagonist.
- 16. (Reiterated) The method of claim 2, wherein the substance is an IL-11R binding peptide.
- 17. (Reiterated) The method of claim 2, wherein the substance is an anti IL-11R antibody which inhibits interactions between IL-11 and the IL-11R.
- 18. (Reiterated) The method of claim 2, wherein the substance is an anti IL-11R antibody which inhibits interactions between IL-11R and gp130.
- 40. (Amended Twice) A composition useful in inhibiting IL-11 / IL-11R binding comprising an antibody which specifically binds the IL-11R and blocks binding between IL-11 and IL-11R.

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(Amended Twice) A composition useful in inhibiting IL-11R / gp130 binding via the gp130 binding site on IL-11R comprising an antibody which specifically binds the IL-11R and blocks binding between gp130 and IL-11R.

Please add the following new claim:



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The claims presented above incorporate changes as indicated by the marked-up versions below.

- 1. (Amended Twice) A method for inhibiting reduction of bone density in a mammalian patient having a pathological condition in which bone density is decreased, comprising inhibiting in the patient the formation of a tertiary complex of Interleukin-11 (IL-11), Interleukin-11 receptor (IL-11R), and glycoprotein 130 (gp130), thereby decreasing the rate in loss of bone density in said mammalian patient.
- 5. (Amended Twice) The method of claim 4 or claim 8, wherein the substance is a mutant IL-11R has with at least one mutation in its gp130 binding region.
- (Amended Twice) The method of claim 5, wherein the substance is a mutant IL-11R has having at least one of the following mutations: D282→G282, A283→D283, G286→D286, H289→Y289, and V291→L291.
- 7. (Amended Twice) The method of claim 6, wherein the substance is a mutant IL-11R has having the mutation H289→Y289.
- 8. (Amended Twice) The method of claim 64, wherein the substance mutant IL-11R is a soluble mutant IL-11R.
- 9. (Amended Twice) The method of claim 4 or claim 8, wherein the mutant IL-11R is a human IL-11R.
- 13. (Amended Twice) The method of claim 12, wherein the substance is a peptide comprising the sequence identified by SEQ ID No. 5 SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 9, or SEQ ID NO: 10.